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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,440

06/23/2006

Shoji Aihara

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EXAMINER

MICHALSKI, SEAN M

ART UNIT

PAPER NUMBER

3724

NOTIFICATION DATE

DELIVERY MODE

03/09/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com  
pto@gbpatent.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,440	<b>Applicant(s)</b> AIHARA ET AL.	
	<b>Examiner</b> SEAN M. MICHALSKI	<b>Art Unit</b> 3724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 1-7,9-11,14-16 and 18-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8,12,13 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells (US 3,830,131) in view of Gagne (USPGPUB 20020069738) or Chiang (US 6,772,664).

Wells discloses a band saw machine, method of operating and method of assembling. Wells discloses an endless saw blade (52 figure 1), a driving wheel (43) and a driven wheel (50), a saw blade driving unit (45 figure 1), coupled to the driving wheel (by pulley 48) and in a floating relationship to the Housing (49, 51 is the housing, which is readily floatably movable relative to the driving unit; column 3 lines 1-15). Wells further discloses a buffer part (32, 33 figure 1) which controls the rotating direction of the saw blade (by being present, the buffer part prevents rotation in all three senses- see figure 3). It's presence dampens the reaction force generated by driving of the saw blade, and is provided "at " the saw blade housing (one at the left housing and one at the right housing- see figure 1). The three senses described above include the 'same direction as saw blade rotating direction.

Wells further discloses coupling the saw blade driving unit to the blade. This is inherently disclosed since, as in figure 1, the driving unit is shown connected to the

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shaft (47) via a pulley (48). The control of the rotation of the blade is automatically provided for by the buffer part 32 and 33, which restrain the rotation of the saw blade about all three axes. When the saw is driven, the buffer part will automatically dampen a reaction force caused by the driving of the saw blade, since they are engaged. If the saw blade will react, the buffer part will absorb some of the force, since they are in constrained contact with each other.

Wells does not disclose that the casing of the saw blade driving unit floats rotationally around the driving wheel shaft.

Gagne discloses that a casing of the driving unit (16 and the flange extending upwardly at the left edge of 16 figure 2B comprise a "casing") is positioned to float around the driving wheel shaft (driven on pulley 19 figure 2B). They float relative to one another. Alternatively, the reversal of parts is not inventive, and the casing may be reversed to float relative to the driving wheel shaft. It has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167. The floating in either case of Gagne teaches the use of rotational band saw adjustment for guiding the blade.

It would have been obvious to one of ordinary skill in the art to use a blade tilting mechanism as taught by Gagne to allow for angular adjustment of a band saw blade. Including an additional feature such as angular adjustment is more marketable than a non angularly adjustable band saw.

Chiang discloses a casing of a saw blade driving unit (13 is a casing) floats rotationally around the driving wheel shaft (column 1 generally describing the motor

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driving the blade means the driving shaft is within the casing of the motor, or connected thereto as in figure 2). When the saw blade mechanism (as in figure 2, including the casing are rotated y unlocking the handle on the right side of figure 2, and allowing 13 to move through the slot in base 11, the casing is rotating around the driving wheel shaft. The casing floats rotationally around the driving wheel shaft.

It would have been obvious to one of ordinary skill in the art to use a blade tilting mechanism as taught by Chiang to allow for angular adjustment of a band saw blade in a band saw mechanism such as that used by Wells. Including an additional feature such as angular adjustment is more marketable than a non angularly adjustable band saw.

3. Claims 8, 12, 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wells (US 3,830,131) in view of Gagne (USPGPUB 20020069738) or Chiang (US 6,772,664) as above, and further in view of Brandstadter (US 5,178,405).

Wells does not disclose a vibration generating device for applying vibration to the driving unit.

Brandstadter discloses active damping (active control loop) which applies force vibrations to an axle to reduce the vibrations experienced by one or more elements of a device, *for improved accuracy* and better feel.

It would have been obvious to one of ordinary skill in the art to apply active damping techniques as taught by Brandstadter to the buffer parts of Wells, since doing so would increase the efficiency of the damping/ prevention of rotation therein. Active damping at the buffer parts would have generated vibrations felt at the driving unit,

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since the buffer part is connected to the driving part, and vibration is transmitted through the connection.

### ***Response to Arguments***

4. Applicant's arguments filed 12/18/2008 have been fully considered but they are not persuasive.

5. Applicant's arguments with respect to claims 8 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Applicant alleges that the teachings of Brandstadter are not applicable to a band saw, since the arts are different. See *KSR International v. Teleflex Inc.* 550 U.S.

\_\_\_\_\_(2007) slip op at 13, lines 22-34 which states "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious".

Although the two references are different, the **vibration of a drive shaft** is constant, and a teaching of reduction of impact upon a shaft will *be equally applicable in both areas*. See *KSR International Co. v. Teleflex Inc. et al.* No. 04-1350, 550 U.S.

\_\_\_\_\_(2007) slip op at 13, which states, "When a work is available in one field of endeavor, *design incentives* ... can prompt variations of it, either in the same field **or a different one**. If a person of ordinary skill *can* implement a predictable variation, §103 likely bars its patentability" (*emphasis added*). Brandstadter clearly describes the *design incentives* of selecting an active vibration reducer versus a passive vibration reducer; because active vibration reducers are better (provide better accuracy and feel), though more expensive and passive vibration reducers are better when cost is an issue in

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design. Examiner believes that it is common sense that active vibration reducers are generally more expensive than passive vibration reducers.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN M. MICHALSKI whose telephone number is (571)272-6752. The examiner can normally be reached on M-F 7:30AM - 3:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Boyer Ashley can be reached on 571-272-4502. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sean M Michalski/  
Examiner, Art Unit 3724

/Kenneth Peterson/  
Primary Examiner, Art Unit 3724